



State of Utah

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Lieutenant Governor

Department of Environmental Quality

William J. Sinclair
Acting Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-IN0125160004-09

February 12, 2009

Russell Leslie
Sunroc Corporation
180 North 300 East
St. George, Utah 84770

Dear Mr. Leslie:

Re: Intent to Approve: Modifications to Approval Order (DAQE-216-02) to Add Equipment and Plan Current and Future Operations Without PM₁₀ Emission Increases
Washington County – CDS B, NSPS, HAPs, Title V Area
Project Code: N012516-0004

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any questions you may have on this project to Mr. Enqiang He. He may be reached at (801) 536-4010.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section

JTB:EH:sa

cc: Southwest Utah Public Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**INTENT TO APPROVE: Modifications to Approval Order
(DAQE-216-02) to Add Equipment and Plan Current and Future
Operations without PM₁₀ Emission Increases**

**Prepared By: Enqiang He, Engineer
(801) 536-4010
Email: ehe@utah.gov**

INTENT TO APPROVE NUMBER

DAQE-IN0125160004-09

Date: February 12, 2009

Sunroc Corporation

**Source Contact
Russell Leslie
(435) 634-2200**

**M. Cheryl Heying
Executive Secretary
Utah Air Quality Board**

Abstract

Sunroc Corporation operates aggregate mining, processing and concrete mixing plants located at 1825 East 3850 South, St. George. The source has requested modifications to its Approval Order (DAQE-216-02) to (1) replace the double deck screen with a triple deck screen; (2) replace the 300 HP diesel generator with a generator rated at 350 HP; (3) add a hot water heater rated at 5.5 MMBtu/hr; (4) Add a crusher rated at 300 tons per hour, and (5) include drilling and blasting operations. These modifications result in a reduction in PM₁₀ emissions of 0.16 tons per year.

In addition to the modifications above, the source has requested the following in order to stay under currently permitted PM₁₀ emissions. Using the current methods, the source has updated the haul road emissions based on the operations in 2002 when aggregate mining and processing were conducted at the northern Fort Pierce Pit. The update results in 8.28 tons per year of PM₁₀ emissions instead of 0.99 tons per year estimated in 2002. Therefore, the combined PM₁₀ emissions that are available for the new proposal are 8.44 tons per year. The source in fact conducts the aggregate mining and processing operations at the State Pit, one half mile south of the Fort Pierce Pit. The source plans to pave eight segments of haul roads including UP-1 & 3, UP-6, 7 & 8, and UP-10, 11 & 12. The source has also proposed to limit the washed aggregate to 493,000 tons per year. These measures bring down PM₁₀ emissions from the haul roads to 8.44 tons per year, resulting in no PM₁₀ emission increases. Other emissions, in tons per year, will change as follows: NO_x -9.99, SO₂ -0.62, CO +1.33, and VOC -0.89. The changes in emissions will result in the following, in tons per year, potential to emit totals: PM₁₀ = 14.04, NO_x = 20.31, SO₂ = 2.34, CO = 11.93, VOC = 1.41 and HAPs = 0.01.

The source has also requested moving back to the northern Fort Pierce Pit from the State Pit in the next two to three years when the State Pit is exhausted. The following haul roads will no longer be used after moving back: UP-1 through 4, loader haul roads in the State Pit (LD-1, LD-2 and LD-x), UP-11 and UP-12. As a result, fugitive dust emissions from the remaining haul roads will be reduced to 7.36 tons per year. The source does not propose any changes on other operations; therefore, moving back to the northern Fort Pierce Pit from the State Pit will reduce PM₁₀ emissions by 1.08 tons per year. The future potential to emit totals, in tons per year, will be at the following levels: PM₁₀ = 12.96, NO_x = 20.31, SO₂ = 2.34, CO = 11.93, VOC = 1.41 and HAPs = 0.01.

The source is located in Washington County. The county is an attainment area of the National Ambient Air Quality Standards (NAAQS) for all pollutants. New Source Performance Standards (NSPS), Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Non-metallic Mineral Processing Plants) apply to this source. Title V of the 1990 Clean Air Act applies to this source.

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in The Daily Spectrum on February 15, 2009. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed Approval Order conditions during this period and make any comments you may have. The proposed conditions of the Approval Order may be changed as a result of the comments received. Unless changed, the Approval Order will be based upon the following conditions:

General Conditions:

1. This Approval Order applies to the following company:

Site Office

Sunroc Corporation
1825 East 3850 South
St. George, UT 84770

Corporate Office Location

Sunroc Corporation
180 North 300 East
St. George, UT 84770
Phone Number (435) 634-2200
Fax Number (435) 673-7828

The equipment listed in this Approval Order shall be operated at the following location:

Plant Location

The Fort Pierce Pit, 1825 East 3850 South, St. George, Washington County
(The aggregate mining and processing operations are currently located at the State Pit, one half mile south of the Fort Pierce Pit; both operations will be moved back to the Fort Pierce Pit in two to three years when the State Pit is exhausted)

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,102.38 kilometers Northing, 273.64 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this Approval Order (AO) conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.
5. All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years.

6. Sunroc Corporation shall operate the Fort Pierce Pit and the State Pit in accordance with the terms and conditions of this AO, which was written pursuant to Sunroc Corporation's NOI submitted to the DAQ on December 26, 2007, and additional information submitted to the DAQ on July 31 and September 10, 2008, and January 2, 2009.
7. This AO shall replace the AO (DAQE-216-02) dated March 22, 2002.
8. The approved installations shall consist of the following equipment:

Aggregate Harvesting and Processing Plant

- A. Three (3) Crushers (40 CFR 60 Subpart OOO)
Rated Capacity: 450 tons per hour each
- B. Three (3) Triple Deck Horizontal Screens** (one new) (40 CFR 60 Subpart OOO)
Rated Capacity: 450 tons per hour each
- C. One (1) Crusher** (40 CFR 60 Subpart OOO)
Rated Capacity: 300 tons per hour

Aggregate Wash Plant

- D. One (1) Triple Deck Horizontal Screen (40 CFR 60 Subpart OOO)
Rated Capacity: 450 tons per hour

Truck Mix Concrete Plant

- E. One (1) Cement Silo
Attached Equipment: One (1) Baghouse/Bin Vent
Bag Material: Cotton *
- F. One (1) Flyash Silo
Attached Equipment: One (1) Baghouse/Bin Vent
Bag Material: Cotton *
- G. One (1) Truck Mix Concrete Loading Drum
Attached Equipment: One (1) Baghouse
Bag Material: Cotton *

Equipment in Use Throughout Entire Plant

- H. Various Conveyors (40 CFR 60 Subpart OOO)
- I. Various Off-Highway Mobile Equipment Items *
- J. One (1) Generator**

Fuel Type	Diesel
Electrical Output:	350 HP
- K. One (1) natural gas/propane Hot Water Heater** rated at 5.5 MMBtu/hr

Miscellaneous mining activities including drilling and blasting operations**

* Listed for informational purposes only.

** New equipment or operations

- 9. A manometer or magnehelic pressure gauge shall be installed to measure the differential pressure across the fabric filters in each of the baghouses listed in condition #8. Where a bin vent is operated, the manometer or magnehelic pressure gauge is not required. Static pressure differential across the fabric filter shall be between 1.1 to 6.0 inches of water column in each case. The pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. The reading shall be accurate to within plus or minus 1.0 inches water column. Intermittent recording of the reading is required on a once per operational day basis.

Limitations

- 10. Visible emissions from the following emission points shall not exceed the following values:
 - A. All crushers - 15% opacity
 - B. All screens - 10% opacity
 - C. All conveyor transfer points - 10% opacity
 - D. All baghouse exhaust stacks - 10% opacity
 - E. All diesel engines - 20% opacity
 - F. Conveyor drop points - 20% opacity
 - G. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For equipment subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

Initial visible emission observations shall consist of 30 observations of six minutes each in accordance with 40 CFR 60.11(b). Equipment subject to NSPS Subpart OOO shall comply with 40 CFR 60.675(3) or 40 CFR 60.675(4). All visible emission observations must be conducted in accordance with 40 CFR 60, Appendix A, Method 9. A certified observer must be used for these observations. Emission points which are subject to the initial observations are the new screen and crusher listed in Condition 8.B and C, respectively.

11. The following limits shall not be exceeded:
 - A. 600,000 tons of aggregate produced per rolling 12-month period
 - B. 493,000 tons of aggregate washed per rolling 12-month period when the aggregate mining and processing operations are located at the State Pit and the wash plant is located at the Fort Pierce Pit
 - C. 600,000 tons of aggregate washed per rolling 12-month period when all operations are located at the Fort Pierce Pit
 - D. 225,000 cubic yards of concrete produced per rolling 12-month period
 - E. 3,000 hours of bulldozer operation per rolling 12-month period
 - F. 50 hours of power generator operation per rolling 12-month period
 - G. 500 hours of hot water heater operation per rolling 12-month period
 - H. A maximum of 25 blasts per rolling 12-month period

To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months, and submit the data to the DAQ by the first day of the following month. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by the belt scale records near the initial feeder. The records of production shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

12. The power generator shall be used for electricity producing operation only during the periods when electric power from the public utilities is interrupted, or for regular maintenance of the generators. Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of the generator usage, and the reason for each generator usage.

Roads and Fugitive Dust

13. Sunroc Corporation shall submit a paved haul road maintenance plan acceptable to the Executive Secretary for control of fugitive dust emissions from all paved haul roads associated with the source. The maintenance plan shall include the frequencies of watering, sweeping and/or vacuuming. Sunroc Corporation shall submit the maintenance plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO.
14. Visible fugitive dust emissions from paved and unpaved haul-road traffic and mobile equipment in unpaved operational areas shall not exceed 20% opacity at any point. Visible emission determinations shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle.
15. When conducting aggregate mining and processing operations at the State Pit, the source shall:
 - A. Use the following paved haul roads:
P-1, P-2, UP-1, UP-3, UP-6, UP-7, UP-8, UP-10, UP-11 and UP-12, and
 - B. Use the following unpaved haul roads:
UP-5, UP-9 and various loaders unpaved haul roads
16. When conducting aggregate mining and processing operations at the Fort Pierce Pit, the source shall:
 - A. Use the following paved haul roads:
P-1, P-2, UP-6, UP-7 and UP-8, and
 - B. Use the following unpaved haul roads:
UP-5, UP-9, UP-10 and various loaders unpaved haul roads
17. The owner/operator shall vacuum sweep and flush with water all the paved haul roads on site to maintain opacity limits listed in this AO. If the temperature is below freezing, the owner/operator shall continue to vacuum sweep the road but may stop flushing the paved haul roads with water. If the haul roads are covered with snow or ice, the owner/operator may stop vacuum sweeping the paved haul roads and flushing the paved haul roads with water.

Records of vacuum sweeping and water application shall be kept for all periods when the plant is in operation. The records shall include the following items:

- A. Date and time treatments were made
- B. Number of treatments made and quantity of water applied
- C. Rainfall amount received, if any

- D. Records of temperature, if the temperature is below freezing
 - E. Records shall note if the paved haul roads are covered with snow or ice.
18. The owner/operator shall cover all unpaved haul roads and wheeled-vehicle operational areas with road base material and shall use water application to maintain opacity limits listed in this AO. If the temperature is below freezing, the owner/operator may stop applying water to the unpaved haul roads and wheeled-vehicle operational areas.

Records of water application shall be kept for all periods when the plant is in operation. The records shall include the following items:

- A. Date and time treatments were made
 - B. Number of treatments made and quantity of water applied
 - C. Rainfall amount received, if any
 - D. Records of temperature, if the temperature is below freezing.
19. The source shall abide by all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources.

Fuels

20. The owner/operator shall use only #2 fuel oil as fuel in the off-highway mobile equipment and the power generator, and natural gas or propane in the hot water heater.
21. The sulfur content of any fuel oil or diesel burned shall not exceed:

0.5 percent by weight for diesel fuels consumed in all equipment.

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of all fuels shall be either by Sunroc Corporation's own testing or test reports from the fuel marketer.

Federal Limitations and Requirements

22. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, NSPS Subpart A, 40 CFR 60.1 to 60.18 and Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Non-metallic Mineral Processing Plants) apply to this installation.

Records & Miscellaneous

23. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.

24. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
25. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.
26. Sunroc Corporation shall notify the Executive Secretary of the closure of the State Pit and moving back to the Fort Pierce Pit prior to the relocation of the aggregate mining and processing operations.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The annual emission estimations below include point sources and fugitive dust sources. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential to Emit (PTE) emissions for Sunroc Corporation (the Fort Pierce Pit and the State Pit) are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM ₁₀	14.04##
B.	SO ₂	2.34
C.	NO _x	20.31
D.	CO	11.93
E.	VOC	1.41
F.	HAPs	
	Total HAPs	0.01

PM₁₀ emissions are estimated to be 12.96 tons per year after the mining and processing operations move back to the Fort Pierce Pit

The DAQ is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section